

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

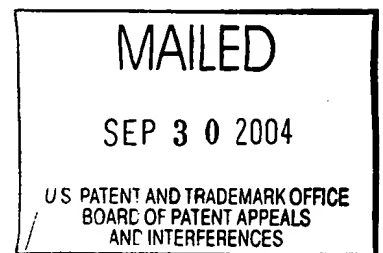
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte GREGORY M. MAROCCO

Appeal No. 2004-2188  
Application 09/135,804

ON BRIEF



Before KIMLIN, GARRIS, and WALTZ, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 1 through 30, which are the only claims pending in this application.<sup>1</sup> We have jurisdiction pursuant to 35 U.S.C. § 134.

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<sup>1</sup>An amendment subsequent to the final rejection was refused entry by the examiner (see the amendment dated July 18, 2000, Paper No. 9, refused entry as per the Advisory Action dated July 26, 2000, Paper No. 10; see the Brief, page 3).

According to appellant, the invention is directed to a catalytic converter and resonator combination device for use in an exhaust system of an internal combustion engine (Brief, pages 3-5). Appellant states that the claims "to the extent separately identified and argued below do not stand or fall together." Brief, page 7. To the extent appellant has "separately identified and argued" individual claims, we consider these claims separately. See 37 CFR § 1.192(c)(7)(2000); *In re McDaniel*, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002). A copy of representative independent claim 1 is attached as an Appendix to this decision.

The examiner has relied upon the following references as evidence of unpatentability:

Lachman et al. (Lachman)	3,885,977	May 27, 1975
Ignoffo	4,032,310	June 28, 1977
Berg et al. (Berg)	4,364,761	Dec. 21, 1982
Munro	4,541,240	Sep. 17, 1985
Harris	5,016,438	May 21, 1991
Plemons, Jr. (Plemons)	5,183,976	Feb. 02, 1993
Wagner et al. (Wagner)	5,355,973	Oct. 18, 1994
Nagai (JP '017)	64-012017	Jan. 17, 1989
(published Japanese Patent Application) <sup>2</sup>		

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<sup>2</sup>We rely on and cite from a full English translation of this document, previously made of record as translation no. PTO 02-4152 by FLS, Inc.

The following rejections are the subject of this appeal:

(1) claims 7, 11-20 and 27 stand rejected under 35 U.S.C. § 112, ¶2, as indefinite (Answer, page 5);<sup>3</sup>

(2) claims 1, 2, 4, 6, 9, 21, 24-26 and 29 stand rejected under 35 U.S.C. § 102(b) as anticipated by Wagner (Answer, page 5);

(3) claims 3, 22 and 23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wagner in view of Munro (Answer, page 8);

(4) claims 5 and 25 stand rejected under section 103(a) over Wagner in view of Plemons (Answer, page 9);

(5) claims 7, 8, 27 and 28 stand rejected under section 103(a) over Wagner in view of Berg or Lachman (*id.*);

(6) claims 10 and 30 stand rejected under section 103(a) over Wagner in view of Ignoffo or Harris (Answer, page 10);

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<sup>3</sup>In the final Office action (Paper No. 7, page 3), claims 1-30 were rejected under 35 U.S.C. § 112, ¶2. The examiner has explicitly withdrawn the rejection of claims 1, 11 and 21 under the second paragraph of section 112 (Answer, page 16). We also note that the rejection of claims 1-30 under the first paragraph of section 112 in the final Office action (Paper No. 7, page 3) has been withdrawn in the Answer (page 16). Finally, we note that the examiner's objection to the amendment filed 2/15/00 under section 132 because it introduces new matter (Paper No. 7, page 2; Answer, page 4) is not a rejection of the claims and thus is not within our jurisdiction. See 35 U.S.C. §§ 6 and 134.

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(7) claims 11, 12, 14, 16, 19 and 20 stand rejected under section 103(a) over Wagner in view of JP '017 and Harris (*id.*);

(8) claim 13 stands rejected under section 103(a) over Wagner in view of JP '017 and Harris, further in view of Munro (Answer, page 11);

(9) claim 15 stands rejected under section 103(a) over Wagner in view of JP '017 and Harris, further in view of Plemons (Answer, page 12); and

(10) claims 17-18 stand rejected under section 103(a) over Wagner in view of JP '017 and Harris, further in view of Berg or Lachman (*id.*).

We reverse the examiner's rejection based on section 112, second paragraph, for reasons stated below. We *affirm* all of the remaining rejections on appeal, based on sections 102(b) and 103(a), essentially for the reasons stated in the Answer and those reasons set forth below.

OPINION

A. *The Rejection under § 112, ¶2*

The examiner states that it is "unclear" what is intended by "width" in claims 7, 17 and 27 (Answer, page 5). The examiner also states that it is "unclear" what is intended by "axially parallel to one another" in claim 11 (*id.*).

Whether a claim fulfills the requirements of the second paragraph of section 112 is a question of law. See *In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). "The legal standard for definiteness [of claim language] is whether a claim reasonably apprises those of skill in the art of its scope." *In re Warmerdam, supra*. As always in any issue of patentability, the initial burden of proof rests with the examiner. See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Here we determine that the examiner has not met that initial burden of proof. The examiner has not explained why the terms in dispute are "unclear," and why one of ordinary skill in this art would not be apprised of the scope of any claims including these terms. The examiner has merely set forth conclusions that these terms are "unclear."

For the foregoing reasons, we cannot sustain the examiner's rejection under 35 U.S.C. § 112, ¶2.

*B. The Rejection under 35 U.S.C. § 102(b)*

The examiner finds that Wagner discloses an apparatus for modifying an exhaust stream, which apparatus comprises a canister 11, a catalytic converter 50 with a substrate 51 having a plurality of passages installed within the forward portion of canister 11, a resonator element 65 having a hollow core with a plurality of sound attenuating perforations 84 installed within the rearward portion of canister 11, the outer diameter of resonator element 65 being smaller than the rearward inner diameter of canister 11 thus defining a sound attenuating plenum 85, and with the inlet end 17 of canister 11, the plurality of passages of catalytic converter element 50, the hollow core of resonator element 65, and outlet end 18 of canister 11 all being axially aligned with one another (Answer, pages 5-6).

Accordingly, the examiner determines that each and every element recited in the rejected claims is described by Wagner within the meaning of section 102(b) (Answer, page 7). We agree.

Appellant argues that Wagner teaches a muffler with a catalytic converter arrangement specifically adapted for use with diesel internal combustion engines (Brief, page 8). Appellant further argues that "[g]enerally speaking, resonators are not mufflers" (*id.*).

These arguments are not well taken. Wagner teaches that his invention is directed to muffler assemblies of a type used to dampen exhaust noise produced by "internal combustion engines" or "an engine" in general (col. 1, ll. 6-9 and 66-67), although embodiments are directed to diesel engines (e.g., see col. 13, ll. 48-49). Appellant even admits that Wagner "alludes" to the use of his sound attenuation arrangement with gasoline internal combustion engines (Brief, page 9). It is well settled patent law that a reference is not limited to its specific embodiments but is available for all that it discloses and suggests to one of ordinary skill in the art. See *In re Widmer*, 353 F.2d 752, 757, 147 USPQ 518, 523 (CCPA 1965). Additionally, we note that appellant's argument is not commensurate with the scope of the claims, since the claims are directed to an apparatus *per se*, and even the intended use statement in the claims is generic to "an internal combustion engine" inclusive of gas and diesel engines (e.g., see claims 1 and 21).

Appellant has not provided any support or evidence for the argument that "generally speaking" a resonator is not a muffler. Wagner teaches throughout his disclosure that the overall assembly is a "muffler assembly" while various portions are "sound attenuation areas" or "resonators." See col. 2, ll. 2-3, where Wagner equates "sound attenuation" with "muffling" (see also col. 6, ll. 13-14). See col. 2, ll. 38-46, where Wagner teaches the use of "resonating chambers" to achieve substantial sound attenuation. See col. 7, ll. 38-65, where Wagner teaches a sonic choke arrangement with resonating chambers to achieve sound attenuation, tuned for advantageous low frequency sound attenuation. Finally, see col. 8, ll. 35-37, and col. col. 12, ll. 56-60, where Wagner teaches that volume 85 will operate as a "resonator" and the arrangement in Fig. 10 is also a "resonator." Therefore there is clearly disclosure in Wagner of at least one resonator element.

Appellant argues that Wagner teaches a muffler arrangement that is structurally and functionally distinguishable from the sound attenuation element of the appealed claims (Brief, page 8). Appellant argues that the "resonating chambers" positioned upstream of region 6 and the downstream sonic choke arrangement



taught by Wagner form pressurized "dead-spaces" that contribute to back pressure, which is desired in diesel engines but would be unsuitable in a standard gasoline engine (Brief, pages 8-9).

These arguments are not persuasive. As discussed above, neither Wagner nor the claimed subject matter is limited to a specific type of internal combustion engine. Furthermore, we note that the claims on appeal, by use of the transitional term "comprising," do not exclude the upstream region of Wagner. See *In re Baxter*, 656 F.2d 679, 686-87, 210 USPQ 795, 802-03 (CCPA 1981). Appellant has not specifically pointed to any structure recited in the claims that is not described by Wagner.

Appellant argues that the attendant advantages of the claimed structure are demonstrated by the "test results" reported in the specification (Brief, page 9). However, any showing of unexpected results is not relevant in a rejection based on section 102(b). See *In re Malagari*, 499 F.2d 1297, 1302, 182 USPQ 549, 553 (CCPA 1974). Appellant also argues that Wagner is deficient as an anticipatory reference since it fails to disclose each structural element and its arrangement as set forth in claims 1 and 21 (Brief, sentence bridging pages 9-10). However, the examiner has established that every element and its

arrangement is described by Wagner (Answer, pages 5-7), and appellant has not *specifically* pointed to any element, or its arrangement, in the claims that is not described by Wagner.

For the foregoing reasons, and those stated in the Answer, we determine that the examiner has established a *prima facie* case of anticipation which has not been adequately rebutted by appellant's arguments. Therefore we affirm the examiner's rejection of claims 1, 2, 4, 6, 9, 21, 24-26 and 29 under section 102(b) over Wagner.

*C. The Rejections under § 103(a)*

We adopt the examiner's findings from Wagner as discussed above. We further adopt the examiner's findings of fact and conclusions of law regarding the secondary references to Munro, Plemons, Berg, Lachman, Ignoffo, Harris, and JP '017 (Answer, pages 8-12). Appellant presents no new arguments with respect to Munro (Brief, page 10), Berg or Lachman (page 11), and JP '017 (page 12).

Appellant argues that Plemons is concerned with a free flowing device capable of sound attenuation which doesn't contribute to increased back pressure, while Wagner's arrangement restricts gas flow to provide the appropriate back pressure (Brief, pages 10-11). This argument is not persuasive since the

device of Plemons is very similar to that of Wagner (see Plemons, Fig. 1). Appellant has not established that the device of Plemons can be considered "free flowing" while the arrangement of Wagner "restricts" gas flow. It is generally settled that the arguments of counsel cannot substitute for objective evidence or expert testimony. See *In re Scarborough*, 500 F.2d 560, 566, 182 USPQ 298, 302 (CCPA 1974). The examiner has established a motivation for the combination of these references (Answer, page 9 and 14-15), as shown by the teachings of Wagner that "acceptable backpressure limits" are preferred (col. 7, ll. 1-3), while Plemons teaches a device capable of sound attenuation "which doesn't contribute to increased back pressure" (col. 2, ll. 55-59).

Appellant argues that Wagner teaches that it is desirable for his converter element to occupy as small a space as possible, while in contrast the examiner combines Ignoffo and Harris with Wagner to show the conventionality of providing multiple catalytic converter elements (Brief, pages 11-12). This argument is not persuasive since one of ordinary skill in this art would have been aware of space considerations, as well as the size of the catalytic converter elements, and the space savings by incorporating the converters with a resonator as taught by

Wagner, depending on use in a gasoline or diesel engine. These space considerations and other factors would have been balanced by the advantage of further purification of the exhaust gas by use of the dual exhaust system of Ignoffo or Harris when considered by one of ordinary skill in this art. As noted above, neither Wagner's disclosure nor appellant's claims are limited to a specific type of internal combustion engine.

For the foregoing reasons and those stated in the Answer, we determine that the examiner has established a *prima facie* case of obviousness in view of the reference evidence. Based on the totality of the record, including due consideration of appellant's arguments, we determine that the preponderance of the evidence weighs most heavily in favor of obviousness within the meaning of section 103(a). Accordingly, we affirm all of the examiner's rejections based on section 103(a).

*D. Summary*

We reverse the examiner's rejection based on section 112, second paragraph.

We affirm the examiner's rejection based on section 102(b). We also affirm the examiner's rejections based on section 103(a). Accordingly, the decision of the examiner is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Edward C. Kimlin  
EDWARD C. KIMLIN  
Administrative Patent Judge

BRADLEY R. GARRIS  
Administrative Patent Judge

THOMAS A. WALTZ  
Administrative Patent Judge

BOARD OF PATENT  
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APPENDIX

1. A catalytic converter and resonator combination device for use in an exhaust system of an internal combustion engine, whereby said device being disposed between an exhaust manifold and an exhaust tail pipe or an exhaust muffler, said device comprising:

a canister for installing in the exhaust system of the internal combustion engine, said canister having a longitudinal axis, and including an inlet end, a forward portion adjacent said inlet end, a rearward portion adjacent said forward portion, an outlet end adjacent said rearward portion, a forward inner diameter, and a rearward inner diameter;

at least one catalytic converter element installed within said forward portion of said canister, with said catalytic converter element having an outer diameter and including a substrate having a plurality of longitudinal passages therethrough, with each of said passages being defined by a plurality of substrate walls, said passages being parallel with the longitudinal axis of said canister;

a resonator element installed within said rearward portion of said canister, with said resonator element having a hollow core, a forward end, a rearward end, an outer diameter, and a plurality of sound attenuating perforations formed radially therethrough;

said outer diameter of said resonator element being smaller than said rearward inner diameter of said canister, and defining a sound attenuating plenum therebetween; and

said inlet end of said canister, said catalytic converter element, said hollow core of said resonator element, and said outlet end of said canister all being aligned along said longitudinal axis with one another for providing straight through flow of engine exhaust therethrough.